ABSTRACT OF THE DISCLOSURE

An inverse multiplexer device has an input port for receiving a stream of data packets, a plurality of output ports for connection to outgoing physical links, and transmit buffers for preparing outgoing packets. An expansion port can receive packets from the transmit buffers and transfer them through a corresponding expansion port on another like inverse multiplexer to designated output links on the other inverse multiplexer. A controller outputs the data packets on a group of any of the aid links in accordance with an inverse multiplex protocol. The multiplexers can be thus cascaded to increase the number of output links that can be accommodated.